Claims

What is claimed is:

1. A water-reactive Al composite material for thermal spraying, characterized in that it comprises Al to which are added, on the basis of the weight of the Al, Bi in an amount of not less than 0.2% by mass and not more than 2% by mass; Si in an amount of not less than 1.5% by mass and not more than 8% by mass; Ti in an amount of not less than 0.2% by mass and not more than 4% by mass; Ce in an amount of not less than 0.2% by mass and not more than 2% by mass; and Mg in an amount of not less than 0.2% by mass and not more than 2% by mass.

2. A method for preparing a water-reactive Al alloy-sprayed film, characterized in that it comprises the steps of melting a material comprising Al to which are added, on the basis of the weight of Al, Bi in an amount of not less than 0.2% by mass and not more than 2% by mass; Si in an amount of not less than 1.5% by mass and not more than 8% by mass; Ti in an amount of not less than 0.2% by mass and not more than 4% by mass; Ce in an amount of not less than 0.2% by mass and not more than 2% by mass; and Mg in an amount of not less than 0.2% by mass and not more than 2% by mass, in such a manner that the composition of the resulting material becomes uniform; spraying the resulting molten material on the surface of a substrate; and then quenching and solidifying the sprayed molten material to thus form a film.

3. A water-reactive Al alloy-sprayed film, characterized in that it consists of a water-reactive Al composite material for thermal spraying as set forth in claim 1.

4. A component for a film deposition chamber used in a film

deposition apparatus, characterized in that it is provided, on the surface thereof, a water-reactive Al alloy-sprayed film which consists of a water-reactive Al composite material for thermal spraying as set forth in claim 1.

5. The component for the film deposition chamber as set forth in claim 4, characterized in that the component is an adhesion preventive plate, a shutter or a mask.